

WHAT IS CLAIMED IS:

1. A method of determining optimum power for writing to an optical disc, comprising:
  - performing a power calibration test comprising:
    - writing test data to a user data area on the optical disc; and
    - reading the test data.
2. The method, as set forth in claim 1, further comprising determining a power test range spanning a current optimum power setting.
3. The method, as set forth in claim 2, further comprising determining the current optimum power setting.
4. The method, as set forth in claim 3, wherein determining the current optimum power setting comprises performing an initial power calibration test using an initial power test range.
5. The method, as set forth in claim 1, wherein writing test data to a user data area comprises writing the test data in response to the determined power test range.
6. The method, as set forth in claim 1, further comprising determining a new optimum power setting in response to reading the test data.
7. The method, as set forth in claim 2, wherein determining a power test range comprises:
  - setting a lower power test value to a predetermined percentage below the current optimum power setting; and
  - setting an upper power test value to a predetermined percentage above the current optimum power setting.

8. The method, as set forth in claim 2, wherein determining a power test range comprises:

setting a lower power test value to approximately 5% below the current optimum power setting; and

setting an upper power test value to approximately 5% above the current optimum power setting.

9. The method, as set forth in claim 4, wherein determining a power test range comprises setting the power test range less than the initial power test range.

10. The method, as set forth in claim 2, wherein determining a power test range comprises setting the power test range to span a predetermined amount of power.

11. The method, as set forth in claim 2, wherein determining a power test range comprises setting the power test range to span approximately 2 milliwatts.

12. The method, as set forth in claim 1, wherein writing test data to a user data area comprises writing test data to a location of the next write operation.

13. The method, as set forth in claim 1, wherein writing test data to a user data area comprises writing test data to a location proximate to the next write operation.

14. The method, as set forth in claim 1, wherein the power calibration test is performed periodically.

15. The method, as set forth in claim 1, wherein the power calibration test is repeated upon meeting a predetermined criteria.

16. The method, as set forth in claim 1, wherein the power calibration test is repeated in response to detecting a rise in temperature of the optical disc.

17. A system for determining optimum power for writing to an optical disc, comprising:

a processor operable to perform a power calibration test comprising:

directing a laser to write test data to a user data area on the optical disc; and

directing a sensor to read the test data written to the user data area on the optical disc.

18. The system, as set forth in claim 17, wherein the processor is operable to determine a power test range spanning a current optimum power setting.

19. The system, as set forth in claim 18, wherein the processor is operable to determine the current optimum power setting.

20. The system, as set forth in claim 18, wherein the processor is operable to perform an initial power calibration test to determine the current optimum power setting.

21. The system, as set forth in claim 18, wherein the processor is operable to write the test data in response to the determined power test range.

22. The system, as set forth in claim 17, wherein the processor is operable to determine a new optimum power setting in response to reading the test data.

23. The system, as set forth in claim 17, wherein the processor is operable to determine a power test range by setting a lower power test value to a predetermined percentage below the current optimum power setting, and setting an upper power test value to a predetermined percentage above the current optimum power setting.

24. The system, as set forth in claim 17, wherein the processor is operable to direct the laser to write test data to a location of the next write operation in the user data area on the optical disc.

25. The system, as set forth in claim 17, wherein the processor is operable to direct the laser to write test data to a location proximate to the next write operation in the user data area on the optical disc.

26. An article of manufacture, comprising:  
a computer-readable medium encoded with a process operable to perform a power calibration test comprising:  
writing test data to a user data area on the optical disc; and  
reading the test data.

27. The article of manufacture, as set forth in claim 26, wherein the power calibration test further comprises determining a power test range spanning a current optimum power setting.

28. The article of manufacture, as set forth in claim 27, wherein the power calibration test further comprises writing the test data in response to the determined power test range.

29. The article of manufacture, as set forth in claim 26, wherein the power calibration test further comprises determining a new optimum power setting in response to reading the test data.

30. The article of manufacture, as set forth in claim 27, wherein the power calibration test further comprises:  
setting a lower power test value to a predetermined percentage below the current optimum power setting; and  
setting an upper power test value to a predetermined percentage above the current optimum power setting.

31. The article of manufacture, as set forth in claim 26, wherein the power calibration test comprises writing test data to a location of the next write operation.

32. The article of manufacture, as set forth in claim 26, wherein the power calibration test comprises writing test data to a location proximate to the next write operation.

33. The article of manufacture, as set forth in claim 26, wherein the power calibration test is repeated upon meeting a predetermined criteria.